NEMATODE EGGS FROM THE GILL REGION OF A SHARK, CARCHARHINUS MILBERTI

By G. A. MacCallum
Of Baltimore, Maryland

On August 29, 1925, we examined at the United States Bureau of Fisheries Commission at Woods Hole, a large shark, *Carcharhinus milberti*, which is sometimes called great blue shark, dusky shark, etc. There were found on the gill arches or attachment of the gills to the cavity of the throat some quite large black patches on the mucous membrane. On further careful examination these proved to be deposits of eggs very like those found the year previous on the under surface of the nose of a *Carcharhinus commersonii* and reported by MacCallum (1925). The eggs appeared to the naked eye similar to those previously reported by MacCallum, although their location was different and they were laid in a different manner. These were in very considerable patches, sometimes as much as two inches long by half an inch wide or wider, and hence quite different from those reported from a shark last year by MacCallum, the latter eggs being in almost mathematically correct squares between the scales and if laid on the edges of the fins they were found to be under the outer layer of the skin. On closer examination of those seen on *Carcharhinus milberti* they were found to be covered with spines (fig. 1), not very closely placed, and visible only under a high magnification. In other respects than this they were of about the same size, color, and shape as those previously reported by MacCallum. Those described here are 110μ by 60μ. Apparently they might belong to the same genus, although evidently of a different species at least, and they may be tentatively referred to the genus *Capillaria*. As in the case of those eggs found on *C. commersonii* no adult worms were found. By placing a few clean eggs between two cover

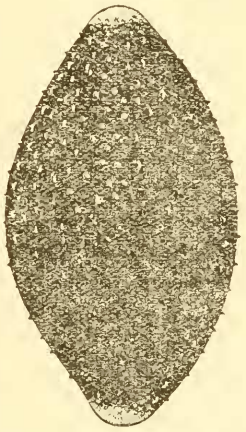

FIG. 1.—EGGS OF CAPILLARIA SPINOSA?

slips, or on a slide with cover slip, and using such pressure as was necessary to crush the ripe eggs, a procedure which required more force than we had expected, several embryos were forced from their shells. These were rather blunt and had smaller tails than the embryos from eggs on *C. commersonii*. They were quite different from the free-living nematodes which are often found with them and which are larger, very active, and have a sharp tail. These latter are often seen in the fluid containing an amount of mucus and other débris from this shark and belong to the genus *Monhystera*.

As the worm eggs described here are from the membranous mucous covering of the connective tissue of the gill arches of *C. milberti* and as the egg shells are spiny, they are regarded as a distinct species. This species I propose to call *Capillaria spinosa*.

In looking for the spiny eggs we discovered eggs of another form. They are spherical, of a light grayish color, and contain a coiled embryo. The embryo appears to be granular as seen through the shell; when extruded from the shell it is sluggish and is somewhat granular throughout its whole length. We have never seen it lively or seeking around for food, as is often the case with nematodes. These eggs are very difficult to mount. This egg does not seem to have been noticed hitherto. The adult worms were not seen. The eggs are about 100μ in diameter and almost always are solitary, although as many as two or three may often be seen in the field of the microscope at the same time. Owing to the entire lack of a recognizable character about these eggs on which to refer them to a known nematode group, no name is attached to them here.

I may say that the accompanying illustration, which has been made in Dr. N. A. Cobb's department, is quite true to nature and meets with my approval.

REFERENCE

MacCallum, G. A.

1925. Eggs of a new species of nematoid worm from a shark, Proc. U. S. Nat. Mus., Wash., vol. 67, art. 16, pp. 1–2, pl. 1, figs. 1–3.

○